



ELSEVIER

Available online at www.sciencedirect.comSCIENCE  DIRECT®

Aquaculture

Aquaculture 257 (2006) 568–571

www.elsevier.com/locate/aqua-online

Contents of *Aquaculture*, Volume 257

VOL. 257 NOS. 1–4**30 June 2006****Genetics**Genetic improvement in coho salmon (*Oncorhynchus kisutch*). II: Selection response for early spawning date

R. Neira, N.F. Diaz (Santiago, Chile), G.A.E. Gall (Davis, CA, USA), J.A. Gallardo (Santiago, Chile), J.P. Lhorente (Santiago, Coyhaique, Chile) and A. Alert (Coyhaique, Chile) 1

Genetic improvement in Coho salmon (*Oncorhynchus kisutch*). I: Selection response and inbreeding depression on harvest weight

R. Neira, N.F. Diaz (Santiago, Chile), G.A.E. Gall (Davis, CA, USA), J.A. Gallardo (Santiago, Chile), J.P. Lhorente (Santiago, Coyhaique, Chile) and R. Manterola (Coyhaique, Chile) 9

Impact of externality on the optimal production of eel (*Anguilla japonica*) aquaculture in Taiwan

Y.-H. Chen (Taipei, Taiwan), W.-C. Lee (Keelung, Taiwan), C.-C. Chen (La Jolla, USA), Y.-H. Chen (Taipei, Taiwan) and I Chiu Liao (Keelung, Taiwan) 18

Identification of sex markers by cDNA-AFLP in *Takifugu rubripes*

J.-Z. Cui, X.-Y. Shen, Q.-L. Gong, G.-P. Yang and Q.-Q. Gu (Qingdao, PR China) 30

Applying microsatellites in two commercial strains of Arctic charr (*Salvelinus alpinus*): Potential for a selective breeding program

D. Dittlecadet, F. Dufresne (Rimouski, Qc, Canada), N.R. Le François (Rimouski, Grande-Rivière, Qc, Canada) and P.U. Blier (Rimouski, Qc, Canada) 37

Growth of Atlantic cod (*Gadus morhua* L.) with different haemoglobin subtypes when kept near their temperature preferenda

A.D. Jordan (Helsingør, Denmark), J.F. Lampe (Sunndalsøra, Norway), B. Grisdale-Helland, S.J. Helland (Sunndalsøra, CoE, Norway), K.D. Shearer (Seattle, WA, USA) and J.F. Steffensen (Helsingør, Denmark) 44

Microsatellite–centromere mapping in the Japanese eel (*Anguilla japonica*) by half-tetrad analysis using induced triploid families

K. Nomura (Minami-ise, Japan), K. Morishima (Hokkaido, Japan), H. Tanaka, T. Unuma (Minami-ise, Japan), K. Okuzawa (Iloilo, Philippines), H. Ohta (Nara, Japan) and K. Arai (Hokkaido, Japan) 53

Complete mitochondrial DNA sequence of the Lake Biwa wild strain of common carp (*Cyprinus carpio* L.): further evidence for an ancient origin

K. Mabuchi (Tokyo, Japan), M. Miya (Chiba, Japan), H. Senou (Kanagawa, Japan), T. Suzuki (Hyogo, Japan) and M. Nishida (Tokyo, Japan) 68

DiseasesRanavirus detection by PCR in cultured tadpoles (*Rana catesbeiana* Shaw, 1802) from South America

L. Galli, A. Pereira, A. Márquez (Montevideo, Uruguay) and R. Mazzoni (Montevideo, Uruguay, Goiânia-GO, Brazil) 78

Experimental infection of some penaeid shrimps and crabs by yellow head virus (YHV)

S. Longyant, S. Sattaman, P. Chaivisuthangkura, S. Rukpratanporn, W. Sithigorngul and P. Sithigorngul (Bangkok, Thailand) 83

Establishment and characterization of India's first marine fish cell line (SISK) from the kidney of sea bass (*Lates calcarifer*)

A.S. Sahul Hameed, V. Parameswaran (Tamilnadu, India), R. Shukla (Pune, India), I.S. Bright Singh (Cochin, India), A.R. Thirunavukkarasu (Chennai, India) and R.R. Bhonde (Pune, India) 92

Use of hydrogen peroxide against the fish pathogen *Tenacibaculum maritimum* and its effect on infected turbot (*Scophthalmus maximus*)

R. Avendaño-Herrera, B. Magariños, R. Irgang and A.E. Toranzo (Santiago de Compostela, Spain) 104

Evaluation of the susceptibility of <i>Aeromonas salmonicida</i> to oxytetracycline and tetracycline using antimicrobial disk diffusion and dilution susceptibility tests F.C. Uhland and R. Higgins (Quebec, Canada)	111
Aerosol dispersal of the fish pathogen, <i>Amyloodinium ocellatum</i> A. Roberts-Thomson, A. Barnes (Brisbane, Queensland, Australia), D.S. Fielder (Nelson Bay, New South Wales, Australia), R.J.G. Lester and R.D. Adlard (Brisbane, Queensland, Australia)	118
Development of the axial skeleton and skeletal abnormalities of Atlantic halibut (<i>Hippoglossus hippoglossus</i>) from first feeding through metamorphosis L.M. Lewis and S.P. Lall (Halifax, Nova Scotia, Canada)	124
Experimental transmission of <i>Macrobrachium rosenbergii</i> nodavirus (<i>MrNV</i>) and extra small virus (XSV) in three species of marine shrimp (<i>Penaeus indicus</i> , <i>Penaeus japonicus</i> and <i>Penaeus monodon</i>) R. Sudhakaran, S. Syed Musthaq (Tamil Nadu, India), P. Haribabu, S.C. Mukherjee (Mumbai, India), C. Gopal (Chennai, India) and A.S. Sahul Hameed (Tamil Nadu, India)	136
Simultaneous PCR detection of two shrimp viruses (WSSV and MBV) in postlarvae of <i>Penaeus monodon</i> in the Philippines K.D.T. Natividad (Tsukuba, Japan; Laguna, Philippines), M.V.P. Migo, J.D. Albaladejo (Quezon City, Philippines), J.P.V. Magbanua (Laguna, Philippines), N. Nomura and M. Matsumura (Tsukuba, Japan)	142
Immunostimulatory effect of a marine yeast <i>Candida sake</i> S165 in <i>Fenneropenaeus indicus</i> T.P. Sajeevan, R. Philip and I.S.B. Singh (Cochin, India)	150
Change of pathogenicity in Olive flounder <i>Paralichthys olivaceus</i> by co-infection of <i>Vibrio harveyi</i> , <i>Edwardsiella tarda</i> and marine birnavirus M.-J. Oh, W.-S. Kim, S.-I. Kitamura (Yeosu, South Korea), H.-k. Lee, B.W. Son (Pusan, South Korea), T.-S. Jung (Jinju, South Korea) and S.-J. Jung (Yeosu, South Korea)	156
Isolation of <i>Vibrio parahaemolyticus</i> from abalone (<i>Haliotis diversicolor supertexta</i> L.) postlarvae associated with mass mortalities J. Cai, Y. Han and Z. Wang (Guangzhou, China)	161
Efficiency and sensitivity determination of Shrimple®, an immunochromatographic assay for white spot syndrome virus (WSSV), using quantitative real-time PCR J.W.B. Powell, E.J. Burge, C.L. Browdy and E.F. Shepard (Charleston, SC, USA)	167
Husbandry and Management	
Effects of the phytoplanktivorous silver carp (<i>Hypophthalmichthys molitrix</i>) on plankton and the hepatotoxic microcystins in an enclosure experiment in a eutrophic lake, Lake Shichahai in Beijing X. Zhang, P. Xie, L. Hao, N. Guo (Wuhan, PR China), Y. Gong, X. Hu (Beijing, PR China), J. Chen and G. Liang (Wuhan, PR China) .	173
Age, but not salinity, affects the upper lethal temperature limits for juvenile walleye (<i>Sander vitreus</i>) S.M. Wilson and J.J. Nagler (Moscow, ID, USA)	187
In situ biodeposition rates of Pacific oysters (<i>Crassostrea gigas</i>) on a marine farm in Southern Tasmania (Australia) I.M. Mitchell (Taroona, Tasmania, Australia)	194
The effect of reduced <i>Artemia</i> and rotifer use facilitated by a new microdiet in the rearing of barramundi <i>Lates calcarifer</i> (BLOCH) larvae J. Curnow, J. King (Western Australia, North Beach, Australia), J. Bosmans (Darwin NT, Australia) and S. Kolkovski (Western Australia, North Beach, Australia)	204
Growth and energy budget of juvenile cobia (<i>Rachycentron canadum</i>) relative to ration L. Sun, H. Chen, L. Huang, Z. Wang and Y. Yan (Guangzhou, Shenzhen, PR China)	214
Predicting the release of mineral nitrogen from hypersaline pond sediments used for brine shrimp <i>Artemia franciscana</i> production in the Mekong Delta C.M. Khoi, V.T. Guong (Cantho City, Vietnam) and R. Merckx (Heverlee, Belgium)	221
Domestication, growth and reproductive performance of wild, pond and tank-reared brown tiger shrimp <i>Penaeus esculentus</i> S.J. Keys and P.J. Crocos (Cleveland, Queensland, Australia)	232
Food consumption and absorption efficiency by newly settled summer flounder, <i>Paralichthys dentatus</i> (Linnaeus, 1766) T.S. Getchis and D.A. Bengtson (Kingston, RI, USA)	241
Oxygen consumption of newly settled summer flounder, <i>Paralichthys dentatus</i> (Linnaeus, 1766) R.S. Katersky (Kingston, RI, USA), M.A. Peck (Hamburg, Germany) and D.A. Bengtson (Kingston, RI, USA)	249
Effectiveness of antifungal treatments during artificial incubation of the signal crayfish eggs (<i>Pacifastacus leniusculus</i> Dana, Astacidae) P.M. Melendre, J.D. Celada, J.M. Carral, M. Sáez-Royuela and A. Aguilera (León, Spain)	257

Abalone farming in South Africa: An overview with perspectives on kelp resources, abalone feed, potential for on-farm seaweed production and socio-economic importance M. Troell (Stockholm, Sweden), D. Robertson-Andersson (Rondebosch, South Africa), R.J. Anderson (Rogge Bay, South Africa), J.J. Bolton (Rondebosch, South Africa), G. Maneveldt (Bellville, South Africa), C. Halling (Stockholm, Sweden) and T. Probyn (Rogge Bay, South Africa).....	266
Can larvae produced from stored sperm in the ornamental crab <i>Mithraculus forceps</i> (A. Milne Edwards, 1875) (Decapoda: Brachyura: Majidae) be used in aquaculture? G. Penha-Lopes (Cascais, Portugal; Melbourne, FL, USA), A.L. Rhyne (Melbourne, FL, USA), J. Figueiredo (Cascais, Portugal), J. Lin (Melbourne, FL, USA) and L. Narciso (Cascais, Portugal)	282
Do different light regimes affect the foraging behaviour, growth and survival of larval cod (<i>Gadus morhua</i> L.)? J. Monk, V. Puvanendran and J.A. Brown (Newfoundland and Labrador, Canada).....	287
The effects of tactile stimulants on feeding, growth, behaviour, and meat quality of cultured Blackfoot abalone, <i>Haliotis iris</i> V.J. Allen (Marlborough, New Zealand), I.D. Marsden (Christchurch 1, New Zealand), N.L.C. Ragg (Nelson, New Zealand) and S. Gieseg (Christchurch 1, New Zealand).....	294
Evaluation of PIT system as a method to tag fingerlings of gilthead seabream (<i>Sparus auratus</i> L.): Effects on growth, mortality and tag loss A. Navarro, V. Oliva, M.J. Zamorano, R. Ginés, M.S. Izquierdo, N. Astorga and J.M. Afonso (Arucas, Spain).....	309
Larval fish behavior can be a predictable indicator for the quality of Japanese flounder seedlings for release Y. Sakakura (Nagasaki, Japan)	316
Metal stresses affect the population dynamics of disease transmission in aquaculture species C.-M. Liao, C.-F. Chang, C.-H. Yeh, S.-C. Chen, K.-C. Chiang, C.-P. Chio, B.Y.-H. Chou (Taipei, Taiwan ROC), L.-J. Jou (Taipei, Ilan, Taiwan ROC), G.-W. Lien, C.-M. Lin, H.-H. Shen and G.-D. Wu (Taipei, Taiwan ROC)	321
Evaluation of treatments to reduce the spread of a marine plant pest with aquaculture transfers B.M. Forrest and K.A. Blakemore (Nelson, New Zealand)	333
Engineering analysis of the stoichiometry of photoautotrophic, autotrophic, and heterotrophic removal of ammonia-nitrogen in aquaculture systems J.M. Ebeling (Radcliff Ln, WV, USA), M.B. Timmons and J.J. Bisogni (Ithaca, NY, USA)	346
Growth, production and food preference of rohu <i>Labeo rohita</i> (H.) in monoculture and in polyculture with common carp <i>Cyprinus carpio</i> (L.) under fed and non-fed ponds M.M. Rahman, M.C.J. Verdegem, L.A.J. Nagelkerke (AH Wageningen, The Netherlands), M.A. Wahab (Mymensingh, Bangladesh), A. Milstein (M.P. Hof HaCarmel, Israel), and J.A.J. Verreth (AH Wageningen, The Netherlands)	359
The developmental regulation of mass cultures of free-living conchocelis for commercial net seeding of <i>Porphyra leucosticta</i> from Northeast America P. He (Shanghai, China; Stamford, CT, USA) and C. Yarish (Stamford, CT, USA)	373
Nutrition	
Effect of aeration on the efficiency of <i>Artemia</i> enrichment with EFA-rich emulsion and liposomes Ó. Monroig, J.C. Navarro, F. Amat (Castellón, Spain), P. González (Barcelona, Spain) and F. Hontoria (Castellón, Spain)	382
Replacement of fish meal in cobia (<i>Rachycentron canadum</i>) diets using an organically certified protein A.N. Lunger, S.R. Craig and E. McLean (Blacksburg, VA, USA)	393
Effects of dietary oxidized lipid and vitamin A on the early development and antioxidant status of Siberian sturgeon (<i>Acipenser baeri</i>) larvae S. Fontagné, D. Bazin, J. Brèque, C. Vachot, C. Bernarde (Saint Péé-sur-Nivelle, France), T. Rouault (Saint Seurin-sur-l'Isle, France) and P. Bergot (Saint Péé-sur-Nivelle, France)	400
Effect of dietary protein level on spawning and egg quality of redclaw crayfish <i>Cherax quadricarinatus</i> H. Rodríguez-González (LaPaz, México), M. García-Ulloa (Barra de Navidad, México), A. Hernández-Llamas and H. Villarreal (LaPaz, México)	412
Relationship between intestinal brush border enzymatic activity and growth rate in tilapias fed diets containing 30% or 48% protein Y. Hakim (Bet Dagan, Israel), Z. Uni (Rehovot, Israel), G. Hulata and S. Harpaz (Bet Dagan, Israel)	420
Pigmenting efficacy of astaxanthin fed to rainbow trout <i>Oncorhynchus mykiss</i> : Effect of dietary astaxanthin and lipid sources G. Choubert (Saint-Péé-sur-Nivelle, France), M.M. Mendes-Pinto and R. Morais (Porto, Portugal)	429
Growth and phosphorus loading by partially replacing fishmeal with tuna muscle by-product powder in the diet of juvenile Japanese flounder, <i>Paralichthys olivaceus</i> O. Uyan, S. Koshio, S.-i. Teshima, M. Ishikawa, M. Thu (Kagoshima, Japan), Md.S. Alam (Wilmington, NC, USA) and F.R. Michael (Kagoshima, Japan)	437
Effects of lecithin and cholesterol supplementation to practical diets for <i>Litopenaeus vannamei</i> reared in low salinity waters L.A. Roy, D.A. Davis (Auburn, AL, United States) and I.P. Saoud (Beirut, Lebanon)	446

An integrated assessment of gross marine protein sources used in formulated microbound diets for barramundi (<i>Lates calcarifer</i>) larvae L. Nankervis and P.C. Southgate (Townsville, Queensland, Australia)	453
Zinc picolinate supplementation decreases oxidative stress in rainbow trout (<i>Oncorhynchus mykiss</i>) Z. Kucukbay, H. Yazlak (Malatya, Turkey), N. Sahin, M. Tuzcu, M. Nuri Cakmak, F. Gurdogan (Elazig, Turkey), V. Juturu (NY, USA) and K. Sahin (Elazig, Turkey)	465
The effects of daily ration on growth and smoltification in 0+ and 1+ Atlantic salmon (<i>Salmo salar</i>) parr I.K. Berrill (Scotland, UK), M.J.R. Porter (Tasmania, Australia) and N.R. Bromage (Scotland, UK)	470
Use of microbound diets for larval culture of the mud crab, <i>Scylla serrata</i> M.-H. Holme, C. Zeng and P.C. Southgate (Townsville, Queensland, Australia)	482
The nutritional value of seven species of tropical microalgae for black-lip pearl oyster (<i>Pinctada margaritifera</i> , L.) larvae E. Martínez-Fernández, H. Acosta-Salmón and P.C. Southgate (Townsville, Queensland, Australia)	491
Physiology and Endocrinology	
Pre or post mortem muscle activity in Atlantic salmon (<i>Salmo salar</i>). The effect on rigor mortis and the physical properties of flesh B. Roth, E. Slinde and J. Arildsen (Bergen, Norway)	504
Induction of spawning of captive-reared Senegal sole (<i>Solea senegalensis</i>) using different administration methods for gonadotropin-releasing hormone agonist M.J. Agulleiro (Tarragona, Generalitat de Catalunya, Spain), V. Anguis, J.P. Cañavate, G. Martínez-Rodríguez (Cádiz, Spain), C.C. Mylonas (Crete, Greece) and J. Cerdà (Tarragona, Barcelona, Generalitat de Catalunya, Spain)	511
Variation in nitrogenous compounds and gonad index in fed and starved sea urchins (<i>Paracentrotus lividus</i>) during live storage S. Arafa, S. Sadok and A. El Abed (Tunisia)	525
Impact of iron-catalyzed dietary lipid peroxidation on growth performance, general health and flesh proximate and fatty acid composition of Atlantic salmon (<i>Salmo salar</i> L.) reared in seawater J. Sutton, S. Balfry, D. Higgs (Vancouver, British Columbia, Canada), C.-H. Huang (Chiayi, Taiwan) and B. Skura (Vancouver, British Columbia, Canada)	534
GnRHa-accelerated spermatogenesis in the testes of underyearling golden rabbitfish, <i>Siganus guttatus</i> (Bloch) T. Komatsu (Okinawa, Japan), R.K. Bhandari (Okinawa, Aichi, Japan), Y. Kobayashi, S. Nakamura (Okinawa, Japan) and M. Nakamura (Okinawa, Saitama, Japan)	558
Book Review	
Selection and Breeding Programs in Aquaculture G. Hulata (Bet Dagan, Israel)	566
Contents of Aquaculture, Volume 257	568

Contents (continued)

Complete mitochondrial DNA sequence of the Lake Biwa wild strain of common carp (<i>Cyprinus carpio</i> L.): further evidence for an ancient origin K. Mabuchi (Tokyo, Japan), M. Miya (Chiba, Japan), H. Senou (Kanagawa, Japan), T. Suzuki (Hyogo, Japan) and M. Nishida (Tokyo, Japan)	68
Diseases	
Ranavirus detection by PCR in cultured tadpoles (<i>Rana catesbeiana</i> Shaw, 1802) from South America L. Galli, A. Pereira, A. Márquez (Montevideo, Uruguay) and R. Mazzoni (Montevideo, Uruguay; Goiânia-GO, Brazil)	78
Experimental infection of some penaeid shrimps and crabs by yellow head virus (YHV) S. Longyant, S. Sattaman, P. Chaivisuthangkura, S. Rukpratanporn, W. Sithigorngul and P. Sithigorngul (Bangkok, Thailand)	83
Establishment and characterization of India's first marine fish cell line (SISK) from the kidney of sea bass (<i>Lates calcarifer</i>) A.S. Sahul Hameed, V. Parameswaran (Tamilnadu, India), R. Shukla (Pune, India), I.S. Bright Singh (Cochin, India), A.R. Thirunavukkarasu (Chennai, India) and R.R. Bhone (Pune, India)	92
Use of hydrogen peroxide against the fish pathogen <i>Tenacibaculum maritimum</i> and its effect on infected turbot (<i>Scophthalmus maximus</i>) R. Avendaño-Herrera, B. Magariños, R. Irgang and A.E. Toranzo (Santiago de Compostela, Spain)	104
Evaluation of the susceptibility of <i>Aeromonas salmonicida</i> to oxytetracycline and tetracycline using antimicrobial disk diffusion and dilution susceptibility tests F.C. Uhland and R. Higgins (Quebec, Canada)	111
Aerosol dispersal of the fish pathogen, <i>Amyloodinium ocellatum</i> A. Roberts-Thomson, A. Barnes (Brisbane, Queensland, Australia), D.S. Fielder (Nelson Bay, New South Wales, Australia), R.J.G. Lester and R.D. Adlard (Brisbane, Queensland, Australia)	118
Development of the axial skeleton and skeletal abnormalities of Atlantic halibut (<i>Hippoglossus hippoglossus</i>) from first feeding through metamorphosis L.M. Lewis and S.P. Lall (Halifax, Nova Scotia, Canada)	124
Experimental transmission of <i>Macrobrachium rosenbergii</i> nodavirus (MrNV) and extra small virus (XSV) in three species of marine shrimp (<i>Penaeus indicus</i> , <i>Penaeus japonicus</i> and <i>Penaeus monodon</i>) R. Sudhakaran, S. Syed Musthaq (Tamil Nadu, India), P. Haribabu, S.C. Mukherjee (Mumbai, India), C. Gopal (Chennai, India) and A.S. Sahul Hameed (Tamil Nadu, India)	136
Simultaneous PCR detection of two shrimp viruses (WSSV and MBV) in postlarvae of <i>Penaeus monodon</i> in the Philippines K.D.T. Natividad (Tsukuba, Japan; Laguna, Philippines), M.V.P. Migo, J.D. Albaladejo (Quezon City, Philippines), J.P.V. Magbanua (Laguna, Philippines), N. Nomura and M. Matsumura (Tsukuba, Japan)	142
Immunostimulatory effect of a marine yeast <i>Candida sake</i> S165 in <i>Fenneropenaeus indicus</i> T.P. Sajeevan, R. Philip and I.S.B. Singh (Cochin, India)	150
Change of pathogenicity in Olive flounder <i>Paralichthys olivaceus</i> by co-infection of <i>Vibrio harveyi</i> , <i>Edwardsiella tarda</i> and marine birnavirus M.-J. Oh, W.-S. Kim, S.-I. Kitamura (Yeosu, South Korea), H.-k. Lee, B.W. Son (Pusan, South Korea), T.-S. Jung (Jinju, South Korea) and S.-J. Jung (Yeosu, South Korea)	156
Isolation of <i>Vibrio parahaemolyticus</i> from abalone (<i>Haliotis diversicolor supertexta</i> L.) postlarvae associated with mass mortalities J. Cai, Y. Han and Z. Wang (Guangzhou, China)	161
Efficiency and sensitivity determination of Shrimple®, an immunochromatographic assay for white spot syndrome virus (WSSV), using quantitative real-time PCR J.W.B. Powell, E.J. Burge, C.L. Browdy and E.F. Shepard (Charleston, SC, USA)	167
Husbandry and Management	
Effects of the phytoplanktivorous silver carp (<i>Hypophthalmichthys molitrix</i>) on plankton and the hepatotoxic microcystins in an enclosure experiment in a eutrophic lake, Lake Shichahai in Beijing X. Zhang, P. Xie, L. Hao, N. Guo (Wuhan, PR China), Y. Gong, X. Hu (Beijing, PR China), J. Chen and G. Liang (Wuhan, PR China)	173
Age, but not salinity, affects the upper lethal temperature limits for juvenile walleye (<i>Sander vitreus</i>) S.M. Wilson and J.J. Nagler (Moscow, ID, USA)	187
In situ biodeposition rates of Pacific oysters (<i>Crassostrea gigas</i>) on a marine farm in Southern Tasmania (Australia) I.M. Mitchell (Taroona, Tasmania, Australia)	194

Contents (continued)

The effect of reduced <i>Artemia</i> and rotifer use facilitated by a new microdiet in the rearing of barramundi <i>Lates calcarifer</i> (BLOCH) larvae	204
J. Curnow, J. King (Western Australia, North Beach, Australia), J. Bosmans (Darwin NT, Australia) and S. Kolkovski (Western Australia, North Beach, Australia)	204
Growth and energy budget of juvenile cobia (<i>Rachycentron canadum</i>) relative to ration	214
L. Sun, H. Chen, L. Huang, Z. Wang and Y. Yan (Guangzhou, Shenzhen, PR China)	214
Predicting the release of mineral nitrogen from hypersaline pond sediments used for brine shrimp <i>Artemia franciscana</i> production in the Mekong Delta	221
C.M. Khoi, V.T. Guong (Cantho City, Vietnam) and R. Merckx (Heverlee, Belgium)	221
Domestication, growth and reproductive performance of wild, pond and tank-reared brown tiger shrimp <i>Penaeus esculentus</i>	232
S.J. Keys and P.J. Crocos (Cleveland, Queensland, Australia)	232
Food consumption and absorption efficiency by newly settled summer flounder, <i>Paralichthys dentatus</i> (Linnaeus, 1766)	241
T.S. Getchis and D.A. Bengtson (Kingston, RI, USA)	241
Oxygen consumption of newly settled summer flounder, <i>Paralichthys dentatus</i> (Linnaeus, 1766)	249
R.S. Katersky (Kingston, RI, USA), M.A. Peck (Hamburg, Germany) and D.A. Bengtson (Kingston, RI, USA)	249
Effectiveness of antifungal treatments during artificial incubation of the signal crayfish eggs (<i>Pacifastacus leniusculus</i> Dana. Astacidae)	257
P.M. Melendre, J.D. Celada, J.M. Carral, M. Sáez-Royuela and A. Aguilera (León, Spain)	257
Abalone farming in South Africa: An overview with perspectives on kelp resources, abalone feed, potential for on-farm seaweed production and socio-economic importance	266
M. Troell (Stockholm, Sweden), D. Robertson-Andersson (Rondebosch, South Africa), R.J. Anderson (Rogge Bay, South Africa), J.J. Bolton (Rondebosch, South Africa), G. Maneveldt (Bellville, South Africa), C. Halling (Stockholm, Sweden) and T. Probyn (Rogge Bay, South Africa)	266
Can larvae produced from stored sperm in the ornamental crab <i>Mithraculus forceps</i> (A. Milne Edwards, 1875) (Decapoda: Brachyura: Majidae) be used in aquaculture?	282
G. Penha-Lopes (Cascais, Portugal; Melbourne, FL, USA), A.L. Rhyne (Melbourne, FL, USA), J. Figueiredo (Cascais, Portugal), J. Lin (Melbourne, FL, USA) and L. Narciso (Cascais, Portugal)	282
Do different light regimes affect the foraging behaviour, growth and survival of larval cod (<i>Gadus morhua</i> L.)?	287
J. Monk, V. Puvanendran and J.A. Brown (Newfoundland and Labrador, Canada)	287
The effects of tactile stimulants on feeding, growth, behaviour, and meat quality of cultured Blackfoot abalone, <i>Haliotis iris</i>	294
V.J. Allen (Marlborough, New Zealand), I.D. Marsden (Christchurch 1, New Zealand), N.L.C. Ragg (Nelson, New Zealand) and S. Gieseg (Christchurch 1, New Zealand)	294
Evaluation of PIT system as a method to tag fingerlings of gilthead seabream (<i>Sparus auratus</i> L.): Effects on growth, mortality and tag loss	309
A. Navarro, V. Oliva, M.J. Zamorano, R. Ginés, M.S. Izquierdo, N. Astorga and J.M. Afonso (Arucas, Spain)	309
Larval fish behavior can be a predictable indicator for the quality of Japanese flounder seedlings for release	316
Y. Sakakura (Nagasaki, Japan)	316
Metal stresses affect the population dynamics of disease transmission in aquaculture species	321
C.-M. Liao, C.-F. Chang, C.-H. Yeh, S.-C. Chen, K.-C. Chiang, C.-P. Chio, B.Y.-H. Chou (Taipei, Taiwan ROC), L.-J. Jou (Taipei, Ilan, Taiwan ROC), G.-W. Lien, C.-M. Lin, H.-H. Shen and G.-D. Wu (Taipei, Taiwan ROC)	321
Evaluation of treatments to reduce the spread of a marine plant pest with aquaculture transfers	333
B.M. Forrest and K.A. Blakemore (Nelson, New Zealand)	333
Engineering analysis of the stoichiometry of photoautotrophic, autotrophic, and heterotrophic removal of ammonia-nitrogen in aquaculture systems	346
J.M. Ebeling (Radcliff Ln, WV, USA), M.B. Timmons and J.J. Bisogni (Ithaca, NY, USA)	346
Growth, production and food preference of rohu <i>Labeo rohita</i> (H.) in monoculture and in polyculture with common carp <i>Cyprinus carpio</i> (L.) under fed and non-fed ponds	359
M.M. Rahman, M.C.J. Verdegem, L.A.J. Nagelkerke (AH Wageningen, The Netherlands), M.A. Wahab (Mymensingh, Bangladesh), A. Milstein (M.P. Hof HaCarmel, Israel), and J.A.J. Verreth (AH Wageningen, The Netherlands)	359
The developmental regulation of mass cultures of free-living conchocelis for commercial net seeding of <i>Porphyra leuosticta</i> from Northeast America	373
P. He (Shanghai, China; Stamford, CT, USA) and C. Yarish (Stamford, CT, USA)	373

Contents (continued)

Nutrition

Effect of aeration on the efficiency of <i>Artemia</i> enrichment with EFA-rich emulsion and liposomes Ó. Monroig, J.C. Navarro, F. Amat (Castellón, Spain), P. González (Barcelona, Spain) and F. Hontoria (Castellón, Spain)	382
Replacement of fish meal in cobia (<i>Rachycentron canadum</i>) diets using an organically certified protein A.N. Lunger, S.R. Craig and E. McLean (Blacksburg, VA, USA)	393
Effects of dietary oxidized lipid and vitamin A on the early development and antioxidant status of Siberian sturgeon (<i>Acipenser baeri</i>) larvae S. Fontagné, D. Bazin, J. Brèque, C. Vachot, C. Bernarde (Saint Péé-sur-Nivelle, France), T. Rouault (Saint Seurin-sur-l'Isle, France) and P. Bergot (Saint Péé-sur-Nivelle, France)	400
Effect of dietary protein level on spawning and egg quality of redclaw crayfish <i>Cherax quadricarinatus</i> H. Rodríguez-González (LaPaz, México), M. García-Ulloa (Barra de Navidad, México), A. Hernández-Llamas and H. Villarreal (LaPaz, México)	412
Relationship between intestinal brush border enzymatic activity and growth rate in tilapias fed diets containing 30% or 48% protein Y. Hakim (Bet Dagan, Israel), Z. Uni (Rehovot, Israel), G. Hulata and S. Harpaz (Bet Dagan, Israel)	420
Pigmenting efficacy of astaxanthin fed to rainbow trout <i>Oncorhynchus mykiss</i> : Effect of dietary astaxanthin and lipid sources G. Choubert (Saint-Péé-sur-Nivelle, France), M.M. Mendes-Pinto and R. Morais (Porto, Portugal)	429
Growth and phosphorus loading by partially replacing fishmeal with tuna muscle by-product powder in the diet of juvenile Japanese flounder, <i>Paralichthys olivaceus</i> O. Uyan, S. Koshio, S.-i. Teshima, M. Ishikawa, M. Thu (Kagoshima, Japan), Md.S. Alam (Wilmington, NC, USA) and F.R. Michael (Kagoshima, Japan)	437
Effects of lecithin and cholesterol supplementation to practical diets for <i>Litopenaeus vannamei</i> reared in low salinity waters L.A. Roy, D.A. Davis (Auburn, AL, United States) and I.P. Saoud (Beirut, Lebanon)	446
An integrated assessment of gross marine protein sources used in formulated microbound diets for barramundi (<i>Lates calcarifer</i>) larvae L. Nankervis and P.C. Southgate (Townsville, Queensland, Australia)	453
Zinc picolinate supplementation decreases oxidative stress in rainbow trout (<i>Oncorhynchus mykiss</i>) Z. Kucukbay, H. Yazlak (Malatya, Turkey), N. Sahin, M. Tuzcu, M. Nuri Cakmak, F. Gurdogan (Elazig, Turkey), V. Juturu (NY, USA) and K. Sahin (Elazig, Turkey)	465
The effects of daily ration on growth and smoltification in 0+ and 1+ Atlantic salmon (<i>Salmo salar</i>) parr I.K. Berrill (Scotland, UK), M.J.R. Porter (Tasmania, Australia) and N.R. Bromage (Scotland, UK)	470
Use of microbound diets for larval culture of the mud crab, <i>Scylla serrata</i> M.-H. Holme, C. Zeng and P.C. Southgate (Townsville, Queensland, Australia)	482
The nutritional value of seven species of tropical microalgae for black-lip pearl oyster (<i>Pinctada margaritifera</i> , L.) larvae E. Martínez-Fernández, H. Acosta-Salmón and P.C. Southgate (Townsville, Queensland, Australia)	491

Physiology and Endocrinology

Pre or post mortem muscle activity in Atlantic salmon (<i>Salmo salar</i>). The effect on rigor mortis and the physical properties of flesh B. Roth, E. Slinde and J. Arildsen (Bergen, Norway)	504
Induction of spawning of captive-reared Senegal sole (<i>Solea senegalensis</i>) using different administration methods for gonadotropin-releasing hormone agonist M.J. Agulleiro (Tarragona, Generalitat de Catalunya, Spain), V. Anguis, J.P. Cañavate, G. Martínez-Rodríguez (Cádiz, Spain), C.C. Mylonas (Crete, Greece) and J. Cerdà (Tarragona, Barcelona, Generalitat de Catalunya, Spain)	511
Variation in nitrogenous compounds and gonad index in fed and starved sea urchins (<i>Paracentrotus lividus</i>) during live storage S. Arafa, S. Sadok and A. El Abed (Tunisia)	525
Impact of iron-catalyzed dietary lipid peroxidation on growth performance, general health and flesh proximate and fatty acid composition of Atlantic salmon (<i>Salmo salar</i> L.) reared in seawater J. Sutton, S. Balfry, D. Higgs (Vancouver, British Columbia, Canada), C.-H. Huang (Chiayi, Taiwan) and B. Skura (Vancouver, British Columbia, Canada)	534
GnRHa-accelerated spermatogenesis in the testes of underyearling golden rabbitfish, <i>Siganus guttatus</i> (Bloch) T. Komatsu (Okinawa, Japan), R.K. Bhandari (Okinawa, Aichi, Japan), Y. Kobayashi, S. Nakamura (Okinawa, Japan) and M. Nakamura (Okinawa, Saitama, Japan)	558

Contents (continued)

Book Review

Selection and Breeding Programs in Aquaculture

G. Hulata (Bet Dagan, Israel) 566

Contents of *Aquaculture, Volume 257* 568

